

In the Claims:

1-14 (Canceled).

15. (Previously Presented) An isolated polynucleotide comprising a nucleotide sequence that encodes a metal ion affinity peptide having a formula of
NH₂-(His-Asn)_n or (His-Asn)_n-COOH, where n=6 (SEQ ID NO: 15).

16. (Previously Presented) The polynucleotide according to claim 15, wherein the polynucleotide comprises a nucleotide sequence encoding a fusion protein comprising a polypeptide and the metal ion affinity peptide, wherein the metal ion affinity peptide is fused to an amino- or carboxy-terminal amino acid of the polypeptide.

17. (Currently Amended) A recombinant vector comprising **[[a]] the** polynucleotide according to claim 15.

18. (Currently Amended) A recombinant host cell comprising **[[a]] the** recombinant vector according to claim 17.

19. (Original) The recombinant host cell according to claim 18, wherein said cell is a prokaryotic cell.

20. (Original) The recombinant host cell according to claim 18, wherein said cell is a eukaryotic cell.

21-25. (Canceled)

26. (Currently Amended) A kit for purifying a protein, comprising:
a) **[[a]] the** recombinant vector according to claim 17; and
b) a metal ion affinity resin.

27. (Original) The kit according to claim 26, further comprising:
an extraction buffer;
a wash buffer; and
an elution buffer.
28. (Original) The kit according to claim 27, further comprising a column.
29. (Canceled)
30. (Previously Presented) An isolated polynucleotide comprising a nucleotide sequence that encodes a metal ion affinity peptide having the amino acid sequence NH₂-His-Leu-Ile-His-Asn-Val-His-Lys-Glu-Glu-His-Ala-His-Ala-His-Asn (SEQ ID NO: 1) or His-Leu-Ile-His-Asn-Val-His-Lys-Glu-Glu-His-Ala-His-Ala-His-Asn-COOH (SEQ ID NO: 1).
31. (Previously Presented) The polynucleotide according to claim 30, wherein the polynucleotide comprises a nucleotide sequence encoding a fusion protein comprising a polypeptide and the metal ion affinity peptide, wherein the metal ion affinity peptide is fused to an amino- or carboxy-terminal amino acid of the polypeptide.
32. (Previously Presented) A recombinant vector comprising a polynucleotide according to claim 30.
33. (Previously Presented) A recombinant host cell comprising a recombinant vector according to claim 30.
34. (Previously Presented) The recombinant host cell according to claim 33, wherein said cell is a prokaryotic cell.
35. (Previously Presented) The recombinant host cell according to claim 33, wherein said cell is a eukaryotic cell.

36. (Previously Presented) A kit for purifying a protein, comprising:
a) a recombinant vector according to claim 32; and
b) a metal ion affinity resin.
37. (Previously Presented) The kit according to claim 36, further comprising:
an extraction buffer;
a wash buffer; and
an elution buffer.
38. (Previously Presented) The kit according to claim 37, further comprising a column.
39. (Currently Amended) An isolated polynucleotide comprising a nucleotide sequence that encodes a metal ion affinity peptide having a formula of
 $\text{NH}_2\text{-(His-Asn)}_n$ or $\text{(His-Asn)}_n\text{-COOH}$, where $n=3-5$ (SEQ ID NOs: ~~28-30~~ 27-29) or 7-10 (SEQ ID NOs: ~~31-34~~ 30-33).
40. (Previously Presented) The polynucleotide according to claim 39, wherein the polynucleotide comprises a nucleotide sequence encoding a fusion protein comprising a polypeptide and the metal ion affinity peptide, wherein the metal ion affinity peptide is fused to an amino- or carboxy-terminal amino acid of the polypeptide.
41. (Currently Amended) A recombinant vector comprising **[[a]] the** polynucleotide according to claim 39.
42. (Currently Amended) A recombinant host cell comprising **[[a]] the** recombinant vector according to claim 41.
43. (Previously Presented) The recombinant host cell according to claim 42, wherein said cell is a prokaryotic cell.

44. (Previously Presented) The recombinant host cell according to claim 42, wherein said cell is a eukaryotic cell.
45. (Currently Amended) A kit for purifying a protein, comprising:
a) **[[a]] the** recombinant vector according to claim 41; and
b) a metal ion affinity resin.
46. (Previously Presented) The kit according to claim 45, further comprising:
an extraction buffer;
a wash buffer; and
an elution buffer.
47. (Previously Presented) The kit according to claim 46, further comprising a column.